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EXAMINER	
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ART UNIT	PAPER NUMBER
2889	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/562,357	HE, RUNLIN	
	Examiner	Art Unit	
	FATIMA N. FAROKHROOZ	2889	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *18 May 2010*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1 -5 and 7-16* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1 -5 and 7-16* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment and Petition to revive the Abandonment

The amendment filed on 5/18/10 and the petition to revive the Abandonment that has already been granted is hereby acknowledged.

Specification

The disclosure is objected to because of the following informalities: Appropriate correction is required.

The corrected specification has errors. Applicant's cooperation is requested in correcting errors of which applicant may become aware in the specification. Examples of some unclear, inexact or verbose terms used in the specification are:

a) On page 4, on the 3rd last line, “tubeis”.

b) On page 5, in line 4: “hating flame”.

c) On page 6, in line 7, “becomes to compacter”.

Claim Objection

Claim 1 is objected to because of the following informalities:

Claim 1 is objected to because from the “preamble” and “from the corresponding limitations of the claim”, it is not clear if a structure of a device is being claimed or if it is the method of making the device that is being claimed in claim 1. The preamble is "integrated shaping discharge tubes"; however the limitations are all drawn to making the tubes for the discharge lamp. Appropriate corrections are needed.

For the purposes of examination, it is deemed that the claim is drawn to the method of making a discharge lamp.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1, 3 and 7-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Itou (US 4869698), in view of Soulard (EP 0133831).

Regarding claim 1, Itou teaches an integrated-shaping discharge tube (Fig.1-5) for a one-shot-modeled compact fluorescent lamps (CFL) comprising straight discharge tubes, a heater with nozzles physically in series for flaming different portions of said straight discharge tubes d) a pair of integrated-shaping dies, including a male die and a corresponding cavity; e) a mechanic arm controlling the opening-up and closing-off of said pair of integrated- shaping dies; wherein each of said discharge tubes is shipped into the heater and treated (col.2,lines 12-21; col.2 ,lines 54 to col.3,1ines 23) in portions of said discharge tube by one or more wide flame nozzles of preset temperatures for a preset duration simultaneously into a U-tube with a pair of leg tubes for fitting into said pair of integrated-shaping dies when said mechanic arm

opens up said pair of dies for receiving said U-tube (col.2, lines 19-21;col.4,1ines 1-3 and 8-9),, and closes off said pair of dies for molding said U- tube within by blowing high pressure air (col.3,1ine 58 to col.4,1ine 5); to said U-tube said for forming a U-tube with a preset curvature radius.

Itou does not teach an a) a conveyer; b) straight discharge tubes and disposed upon said conveyer; c) a heater with three wide flame nozzles of different flaming temperatures; said conveyer is shipped into said heater.

The added Soulard reference teaches that the glass tube is sent to the heater on the conveyer (see Fig.1, Derwent Equivalent Abstracts) for the benefit of achieving fast and mechanized manufacturing of the lamp.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the conveyer as disclosed by Soulard to send the glass tube to the heater in Itou's manufacturing device for the benefit of achieving fast and mechanized manufacturing of the lamp.

Further the previous combination does not teach a c) a heater with three wide flame nozzles of different flaming temperatures.

The added secondary reference Soulard teaches a method of manufacturing of a glass tube, wherein the glass tube is conveyed to lying above wide section nozzles ‘d’(Fig.1), each nozzle having four flaming segments ‘e’, thereby controlling the amount of heat reaching the tube (see Derwent’s Basic Abstract).

Therefore from the teachings of Soulard, it would have been obvious because the technique for improving a particular class of device by changing the **number of nozzles** and the flaming temperatures to be different in Soulard's heating arrangement, was part of the ordinary capabilities of a person of ordinary skill in the art, in view of the teaching of the technique disclosed by Soulard comprising wide section nozzles each nozzle having flaming segments, for improvement in other situations.

Regarding claim 3, Itou teaches an integrated-shaping discharge tube (Fig.1-5) for one-shot-modeled compact fluorescent lamps (CFL), wherein said discharge tube is bent to the shape of an arc.

Regarding claim 7, since secondary reference Soulard teaches a method of manufacturing of a glass tube, wherein the glass tube is conveyed to lying above wide section nozzles 'd' (Fig. 1), each nozzle having four flaming segments 'e', thereby controlling the amount of heat reaching the tube (see Derwent's Basic Abstract); therefore it would have been obvious because the technique for improving a particular class of device by changing the width of the flaming, was part of the ordinary capabilities of a person of ordinary skill in the art, in view of the teaching of the technique disclosed by Soulard comprising wide section nozzles each nozzle having flaming segments ,for improvement in other situations

Regarding claims 8 and 9, wherein the sequence of arranging the wide flame nozzles as i) single segment, followed by single segment, followed by triple segments (as claimed in claim 8) or ii) single segment, followed by triple segment, followed by single segments (as claimed in claim 9) is claimed, it was part of the ordinary capabilities of a person of ordinary skill in the art and it would have been obvious to achieve the sequences in view of the teachings of the technique disclosed by Soulard in order to control the amount of heat reaching the tube.

Regarding claims 10 and 11, wherein treating the different segments with different heating temperatures is claimed; it would have been obvious to one of ordinary skill in the art at the time the invention was made to treat the different segments with different heating temperatures by the wide flame nozzles using Soulard's heating arrangement of the nozzles'd' and segments 'e' in order to control the amount of heat reaching the tube.

Regarding claims 12 and 13, wherein treating the different portions of U-tube with same heating temperature of flame and different heating period of time (as claimed in claim 12) or different segments treated with different heating temperature flame and different heating period of time (as claimed in claim 13) is claimed, it would have been obvious to one of ordinary skill in the art at the time the invention was made to achieve treatment of the different segments with same heating temperatures of flame and different heating period of time by the wide flame nozzles in stage treatment or different segments treated with different heating temperature flame and different heating time in

stage treatment in Soulard's heating arrangement in order to control the amount of heat reaching the tube.

Regarding claim 14, Itou teaches a modeling die (Fig.4; col.1,lines 30-33) used for manufacturing the automatic one-shot-modeled compact fluorescent lamps (CFL) discharge tube including a cavity die and a male die, wherein the die delimiting boundary for the dies is formed along curved axils of the discharge tube so that the U-groove is divided two half-portions respectively formed on the cavity die and the male die along with the die parting face, the cross-section of the U-groove on each die appears to half circle (col.3, lines 16-23; 40-51 and 58-68).

Claims 2 , 4-5 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Itou (US 4869698) and Soulard (EP 0133831), further in view of Holzer et al. (US 6307316).

Regarding claim 2, the previous combination teaches the invention set forth above, however the combination does not teach the dimension of the discharge tubes. Holzer teaches an integrated-shaping discharge tube for a one-shot-modeled compact fluorescent lamps (CFL), wherein the diameter of said leg tube of the discharge tube is 6 ~12 mm (Abstract, col.1, lines 34-39) in order to plug them singly or in groups into different housings.

Therefore it would have been obvious to one of ordinary skill in the art to use the dimensions provided by Holzer in the device of the previous combination in order to plug them singly or in groups into different housings.

Regarding claim 4, Holzer teaches an integrated-shaping discharge tube (see for Example Fig.2) for one-shot-modeled compact fluorescent lamps (CFL) wherein the number of discharge tubes is 2.

Regarding claim 5, Holzer teaches an automatic one-shot-modeled compact fluorescent lamps (CFL) discharge tube, wherein two or more are integrated into a whole compact fluorescent lamps (CFL) , which can be configured to a circle (Fig.22), an ellipse, a rectangle (Fig.20), a triangle (Fig.10) or a polygon in top view (Fig.15-22) in order to combine several low power standard modules instead of instead of high power discharge vessels (col.1,lines 39-41)

Regarding claim 15, Itou teaches molding dies with U-groove shape (Fig.4). Itou also teaches that in the bulb manufacturing method, a sectional shape of discharge path of the bulb can be modified by changing the cavity shape of the molding dies (col.4, lines 38-42).However Itou does not teach that the radius of the U-groove is in the range of 2.5.- 6.5 mm and the preferred value is in the range of 4.0 - 6.0 mm. The added secondary reference Holzer teaches a fluorescent lamp with a discharge tube with a radius that is no more than 6.5 mm (Abstract, diameter is no more than 13 mm)

for the benefit of facilitating plugging of the discharge tubes singly or in groups into different housings. It would have been obvious to one of ordinary skill in the art at the time the invention was made to make molding dies with a U-groove having radius values as disclosed in Holzer, in the Itou device for the benefit of facilitating plugging of the discharge tubes singly or in groups into different housings.

Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Itou (US 4869698) and Soulard (EP 0133831), further in view of Prophet (5413743).

Regarding claim 16, Itou teaches a molding die for manufacturing compact fluorescent lamp discharge tube, wherein the U-groove on the cavity die is kept smooth (U shape-Fig.3). Itou does not teach that the bottom side of the molding die is built with an ejector pin. The added Prophet reference teaches a molding die with an ejector pin for facilitating easy removal of the lamp from the molding machine (col.5,lines 61-64, col.6,lines 31-34 and lines 47-50). It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the ejector pin in the molding machine as disclosed by Prophet, in the Itou molding device for the benefit of facilitating easy removal of the lamp from the molding machine.

However, the secondary Prophet reference does not teach an ejector pin with a cone tip. With respect to claim 16 : the shape of the ejector pin, i.e., cone tip, absent any criticality, are only considered to be obvious modifications of the shape of ejector pin disclosed by Prophet as the courts have held that a change in shape or configuration, without any criticality, is within the level of skill in the art as the particular

shape claimed by Applicant is nothing more than one of numerous shapes that a person having ordinary skill in the art will find obvious to provide using routine experimentation based on its suitability for the intended use of the invention. See ***In re Dailey***, 149 USPQ 47 (CCPA 1976)

Other Art

17. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

JP 60-20448 teaches a lamp with round top and straight legs.

US 2284089 and US 3378243 teach multiple burners used for controlling temperature and reshaping glass.

Chinese Patent CN 2540024Y teaches a Fluorescent lamp with elliptically shaped discharge tubes.

Response to Arguments

The arguments filed by the Applicant on 5/18/10 are acknowledged.

Further the Examiner would like to point out that since Soulard already teaches arrangements of multiple nozzles, therefore with regards to the various widths of the nozzles, the different heating temperatures and time periods of the nozzle flames are well known techniques such as different configurations and design parameters for flame nozzles as disclosed in prior arts of US 6132204, US 5611682, US 5255854, US 4444579, US 4416678.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Fatima Farokhrooz whose telephone number is (571)-272-6043. The examiner can normally be reached on Monday- Friday, 9 am - 5 pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Minh-Toan Ton can be reached on (571) 272-2303. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published

applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Fatima N Farokhrooz/

Examiner, Art Unit 2889

/Joseph L. Williams/

Primary Examiner, Art Unit 2889